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ABSTRACT

The use of a forced-contact procedure to increase the rate of interaction between a socially withdrawn 3 1/2-year-old boy and his peers is described in this paper. A play group, consisting of four 3- to 5-year-old children, met three times a week for approximately 45 minutes in the isolate child's home. Each session consisted of a structured activity, free play activities, and snack time. Peer interaction was forced by instructing the isolate child to pass out a choice of snacks to the other children and by requiring the child to ask each of these children which snack they would prefer. Measures of the child's participation behaviors were sampled during the 20-minute free play time. Results indicated that the procedure was effective in increasing the child's rate of participation with other children. A further increase in participation was achieved when the child's mother positively reinforced his active participation with the other children. (Author/JA)

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# The Modification of Isolate Behavior In a Preschool Child

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## Abstract

The level of active participation with other children was increased in a 3½ year old boy through the use of a forced-contact procedure. The methodology consisted of having the child pass out a choice of snacks to the other children in a play group. Verbal contact was initiated by requiring the child to solicit individual snack preference. The child was also instructed to hand the snack to each child, pairing the child with the snack. The results suggest that the procedure was effective in increasing the child's rate of participation with other children. In the final phase of the study mother attention was added to the forced-contact procedure.

Opportunities for interaction are obviously an integral part of social development. Consequently, a child initially deficient in social skills will be seriously handicapped in subsequently acquiring many of the complex behavioral repertoires necessary for effective social functioning. Children who are unable or who find difficulty in initiating and maintaining social interactions are more likely to experience rejection, harassment, and other forms of hostile treatment from their peers. These aversive experiences may lead to interpersonal avoidance responses, which in turn may further hinder the development of social competencies (O'Conner, 1964).

The importance our society places on adequate social development is evident in the number of studies reporting treatment designed to increase low rates of peer interaction among young children (i.e., Allen, Hart, Buell, Harris & Wolf, 1964; Charlesworth & Hartup, 1967; Furman, Rahe & Hartup, 1979; Harris Wolf & Baer, 1964; Kirby & Toler, 1970; Milby, 1972; O'Connor, 1969).

A child may exhibit isolate behavior for any number of reasons, including shyness, over-attachment to a parent, or rejection by the peer group. Many studies have addressed the problem by assuming that the isolate behavior is under the control of adventitious reinforcement from an adult (Allen et al, 1964; Harris et al, 1964, Reynolds & Risley, 1968; Milby, 1972). In each of these studies the responsible adult spent a significant amount of time attending to the target child's isolate behavior by coaxing him into participation with the other children. When attention was made contingent on participation, participation increased. For example, Allen et al, (1964) modified the isolate behavior of a 4 year-old preschool child by directing teacher attention to her only when she interacted with the other children. In a similar study, Harris, Wolf and Baer (1964) changed the contingencies for adult attention and successfully changed

the isolate behavior of a three year-old boy.

Other studies have considered isolate behavior in the context of the reciprocal nature of peer group interactions. Observations of nursery school children revealed a high positive correlation between the amount of reinforcement emitted toward peers and the amount of reinforcement received from peers (Charlesworth and Hartup's, 1967). O'Conner (1969) used a systematic film presentation of peer interactions with reinforcing consequences to modify social withdrawal in 13 preschool children. Furman, Rahe and Hartup (1979) used younger children as therapists to reinforce the appropriate social interactions of older, isolate preschool children. As a result, socially withdrawn children became as socially active as their peers.

This study reports on a situation in which it was assumed that the child's isolate behavior was being maintained by both adult reinforcement and peer rejection. The strategy employed was designed to increase the rate of interaction between the isolate child and his peers and was similar to one used by Kirby et al. (1970). However, it was modified to minimize the time, effort, and skill required by the mother in implementing the procedure. The isolate child was induced to pass out a choice of snacks to his peer group. By strengthening the interaction behavior in this particular situation it was hoped that the behavior would generalize to other situations. In addition, it was possible that the child's peers would react in a socially reinforcing manner to being given the snack, thus further strengthening interaction behavior.

## METHOD

### Subject

David was a 3½ year-old boy who attended preschool and spent additional

time at a babysitter's home. In both of these settings he had ample opportunity to engage in spontaneous play activities with other children. He also had the opportunity to play with other children when at home. David's teachers and babysitter expressed concern that David "kept to himself" and seemed to prefer adult company to that of his peers. David's mother also observed this same pattern of behavior in his interactions with neighbor children.

Procedure

The experimental setting was David's home, with his mother as primary observer and "play group" directress. Play group and observation sessions were held three times a week for approximately 45 minutes. Four children, ranging in age from three to five, comprised the group. Two of these children were the babysitter's children and the other two were neighbors. David's five year-old sister occasionally participated in the play activities.

Each 45 minute session consisted of a structured activity such as crafts, directed by the mother, free play activities, and "snack time". The experiment took place during a 20 minute period designated as free play. The free play period was unstructured; i.e., the children were permitted to move about freely and play with toys, bicycles etc., with whomever they chose. Snacks were made available to the children during the last ten minutes of the play group session.

Measurement Procedures

Participation skills were divided into categories of specific behaviors: active and passive (See Table 1).

Measures of David's participation behaviors were sampled during the 20 minute free play time. Each 20 minute observation session was divided into

ten, two minute sampling intervals. At the beginning of the first interval David's mother activated a stopwatch. When two minutes were recorded on the stopwatch, mother would record David's behavior at the end of the time period. She recorded a "+" if David were engaging in any of the four defined participation behaviors, or a "0" if he were not. She also indicated which, if any, he had engaged in. She recorded "P" for proximity, "NV" for non-verbal interaction, "V" for verbal interaction or "C" for cooperative play. Although the behaviors within the definition of active and passive participation were not considered mutually exclusive, only one symbol could be used for each interval. The symbol designated the most complex level of participation for that sample (i.e., a verbalization with a smile was recorded as a "V").

Three measures of participating behavior were calculated at the end of each session. The percentage of passive participation was calculated by dividing the total number of "P"s and "NV"s by the total number of samples and multiplying this quotient by 100. The percentage of active participation was calculated by dividing the total number of "V"s and "C"s by the total number of samples and again multiplying by 100. The total percentage of participation was obtained by dividing the total number of "+"s by the total number of samples, multiplied by 100.

On one occasion during each condition a second observer obtained measures of David's participation behaviors to insure reliability of the measurement procedures. On these occasions, when she was ready to take an observation sample, the mother would cue the observer. The observer would then record David's behavior simultaneously with the mother. The percentage of agreement was obtained by dividing the total number of agreements by the total number of observations and multiplying this quotient by 100.

Design

The experimental design utilized was an ABABC withdrawal design.

Baseline Period 1. During this period the mother observed and measured David's participation behaviors in the manner described above. She interacted with David and the other children during free play only to give assistance or to reprimand when necessary.

Forced-Contact Period 1. On the first day of this period, David's mother took him aside and gave him the following instructions:

> Here are two different snacks that I would like to have you pass out to the other children. Each child may have only one snack. I want you to ask each one which snack they would like. Then, I want you to reach into the basket and get it for them. It is very important that you ask each child which snack they would like. After you have given one snack to everyone bring the rest back to me. If you do a good job I will let you pass out the snack again.

The mother then practiced the procedure with David. After he had passed out the snack she praised him for his good work. At this time mother continued to observe and record David's participation during free play.

Baseline Period 2. This period consisted of a brief (two session) return to baseline procedures. David was no longer given the responsibility of passing out the snacks.

Forced-Contact Period 2. This period lasted for four sessions and was a replication of the previous forced-contact period.

Contingent Mother Attention Period. Although this condition was not considered as part of the original design, it was added to the forced-contact procedure to examine the effects on David's active participation behaviors.

Beginning with session 14, David's mother began to direct her attention to him during free play only when he was actively participating with the other children. When he was alone, or only passively participating she directed her attention elsewhere. When David engaged in active participation, she would approach David and the group, often prepared to give them an appropriate materials or toy for their activity, and would praise David for his participation. She also gave praise and recognition to those children participating with David. Praise and recognition to the group as a whole, as well as to David, was included with the intent of maintaining or increasing the other children's rate of participating with David.

During this period, David continued to pass out the snacks.

## RESULTS

The percentage of time David spent in active and passive participation during each of the sessions are depicted graphically in Figure 1. Figure 1 also presents the total percentage of time spent in participation during each session. The total participation includes the behaviors described as proximity, non-verbal interaction, verbal interaction and cooperative play.

It can be seen that during the first baseline period both active and passive participation were emitted at a very low rate, varying between 10 and 30 percent with a mean of 23.5 percent.

When the forced-contact procedure was initiated, David's total participation increased to an average of 77.5 percent, ranging from 60 to 90 percent. During this period active participation averaged 40 percent while passive participation averaged 38 percent.

After the seventh session, when David was no longer given the opportunity to pass out the snacks, total participation dropped to an average of 35 percent, varying between 20 and 40 percent. The mean for active participation was 15 percent, while passive participation averaged 20 percent.

The second forced-contact period was again characterized by increases in active and passive participation, resulting in an increase in total participation. Total participation ranged from 80 to 90 percent with a mean of 87.5 percent. Active participation for this period averaged 52.5 percent, varying between 40 and 65 percent. Passive participation had a mean percentage of 35 with a range of 40 and 60 percent.

When contingent mother attention was added to the forced-contact procedure total participation increased over any of the previous periods. Total participation was 100 percent in each session. Active participation increased to an average of 80 percent, ranging between 70 and 100 percent. Passive participation for this period decreased to an average of 10 percent, varying between 0 and 30 percent.

Interrater reliability measures were taken four times during this study. The percentage of agreement was 92.5 percent, varying between 80 and 100 percent.

## DISCUSSION

The results of this study suggest that the forced-contact procedure was effective in increasing David's participation behaviors. This is particularly evident if changes in total participation, as a demonstrated function of changes in the procedure, are used as the criteria. The active participation data,

however, reveals that even when the forced-contact procedure was in effect, David still spent a significant amount of time by himself while the others played together. It was because of this active participation data coupled with the fact that David still seemed to prefer his mother's company, that mother attention was added as a contingency. When mother attention was added, active participation rose to 100 percent for the first time during this study. This dramatic change may be attributed to the fact that David already had a repertory of skills readily adaptable to undivided play with peers. Until this time he may not have chosen to use these skills for peer play because he found adult interactions more reinforcing than play with children.

The present study did not permit a systematic analysis of the effects of the combined forced-contact and contingent mother attention procedures. Therefore, it cannot be determined exactly what aspect of the procedures produced the large increases in active participation. There remains the possibility that contingent mother attention alone could have modified the isolate behavior. Or it may be possible that the forced-contact procedure is only maximally effective when attention is added at a later time. However, the change might have been just as dramatic if mother attention had been systematically maniuplated first and the forced-contact procedure added later.

The forced-contact procedure itself presents problems of interpretation. Any number of factors could be used to explain why it seems to be an effective procedure for the modification of isolate behavior. For example, David may have participated more with the other children because he had been forced to talk to them in another setting and this behavior had generalized to free play. It is also possible that the other children may have reinforced David when he passed out the snacks, making it easier for all of them to interact at another

time. Another explanation for the success of the procedure might be that by being paired with the snack David had taken on reinforcing properties to the other children. The relative effects of these and many other possible variables cannot be determined on the basis of this study, and must remain in consideration until each is addressed individually in future research.

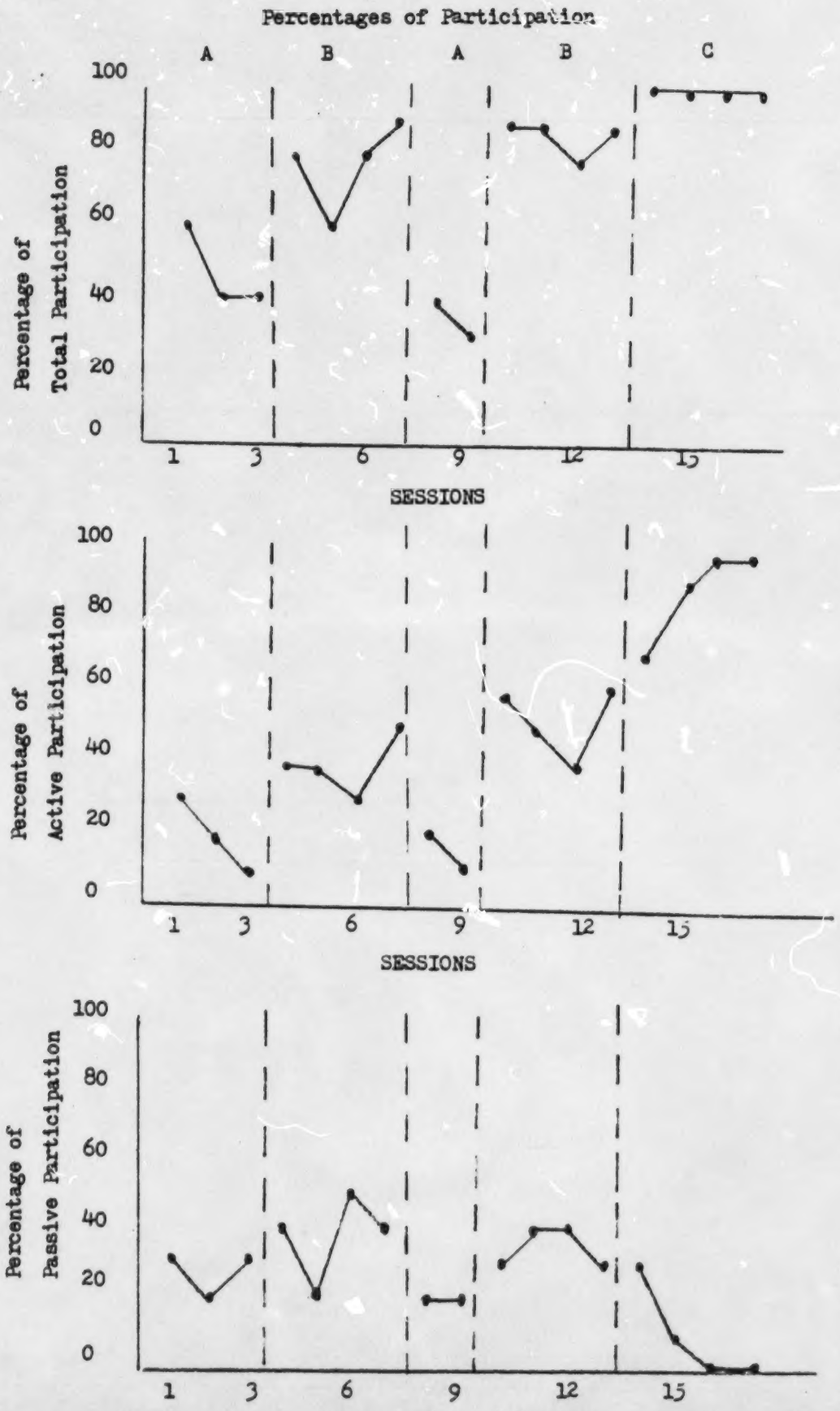
These procedures, alone or in combination, could easily be implemented by a preschool teacher or day-care worker with some modifications. The incidence of isolate behavior among preschool children may warrant the development of procedures such as these to eliminate this potentially deviant behavior.

Table 1

Categories Comprising Participation

| | |
|---|---|
| Passive Participation | 1) Proximity - physical closeness to another child (within approximately 3 feet) |
| | 2) Non-Verbal Interactions- smiling, touching, nodding, or eye-contact while face oriented to another child |
| Active Participation | 1) Verbal Interactions- any word or word chains emitted toward another child or group of children, or initiated by David while face oriented to the other child or group of children |
| | 2) Cooperative Play- shared play: engaging in an activity with another child or group of children |

FIGURE 1


Percentages of Participation
A
B
A
B
C
100
80
60
40
20
0
Percentage of Total Participation
1
3
6
9
12
15
SESSIONS
Percentage of Active Participation
SESSIONS
Percentage of Passive Participation

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